

Semester wise Credit Structure for B. Tech. (ECE)

Category	Semesters	I	II	III	IV	V	VI	VII	VIII	Total
Basic Sciences & Maths (BSM)		8	4	2	4	-	-	-	-	18
Engineering Fundamentals (EF)		5	8	5	-	-	-	-	-	18
Professional Skill (PS)		2	2	-	-	-	-	-	-	4
Program Core (PC)		-	-	10	18	13	14	9	-	64
Management (M)		-	-	-	-	2	2	-	-	4
Humanities & Social Science (HSS)		2	2	2	-	-	-	-	-	6
Humanities & Social Science Elective (HSSE)		-	2	-					-	2
Project (P)		-	-	-	-	-	2	3	-	5
Seminar (S)		-	-	-	-	-	2	-	-	2
Industrial Practice (IP)/ (Minor Project + Industrial Elective (IE))#		-	-	-	-	-	-	-	12	12
Program link basic science and engineering courses (PLBSE) (To be decided by the department)		4	3	3	2	3		-	-	15
Program Electives (PE)		-	-	-	-	4	4	4	-	12
Open Electives (OE) (Other Departments)		-	-	-	-	-	-	3	-	3
Total		21	21	22	24	22	24	19	12	165

CURRICULUM FOR B.TECH. (ECE) PROGRAM

First Year, Semester I

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-101	Calculus and Linear Algebra	3	1	0	4
2.	EF	BEE-101	Fundamentals of Electrical Engineering	3	1	2	5
3.	HSS	BHM-101	Professional Communication	2	0	0	2
4.	BSM	BSM-127	Engineering Physics	3	0	2	4
5.	PS	BEC-103	Electronic Component Testing and Measurement	0	0	4	2
6.	PLBSE	BSM-142	Advanced Environmental Chemistry	3	0	2	4
			Total	14	2	10	21
7.	ECA-I	ECA-100	Induction Program	-	-	-	0

First Year, Semester II

S. N.	Category	Paper Code	Subject	L	T	P	Credit
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1.	BSM	BSM-152	Ordinary and Partial Differential Equations	3	1	0	4
2.	EF	BEC-151	Fundamentals of Electronics Engineering	3	1	2	5
3.	HSS	BHM-155	Engineering Economics	2	0	0	2
4.	EF	BEC-152	Fundamentals of Communication Systems	2	0	2	3
5.	PS	BEC-153	Electronic Workshop	0	0	4	2
6.	PLBSE	BCS-154	Basics of Programming Skills	2	0	2	3
7.	HSSE	BHM-154	Human values & Professional Ethics	2	0	0	2
			Total	14	2	10	21
8.	ECA-II	-		-	-	-	0

Second Year, Semester III

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-226	Physics of Electronic Materials	2	0	0	2
2.	EF	BEC-201	Digital Electronics and Computer Organization	3	1	2	5
3.	HSS	BHM-201	Scientific and Technical Writing	2	0	0	2
4.	PC	BEC-202	Network Analysis & Synthesis	3	1	0	4
5.	PC	BEC-203	Electronic Measurement and Instrumentation	2	1	0	3
6.	PC	BEC-204	Electronic Devices & Circuits	2	1	0	3
7.	PLBSE	BCS-205	Data Structure & Algorithms	2	0	2	3
			Total	16	4	4	22
8.	ECA-III	-		-	-	-	0
9.	AC	-		-	-	-	0

Second Year, Semester IV

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-254	Numerical Techniques	3	1	0	4
2.	PC	BEC-251	Analog Integrated Circuits	3	1	2	5
3.	PC	BEC-252	Principles of Communication Systems	3	1	0	4
4.	PC	BEC-253	Microprocessors and Applications	3	1	2	5
5.	PC	BEC-254	Electromagnetic Field Theory	3	1	0	4
6.	PLBSE	BEC-255	Electronic Software Tools	1	0	2	2
			Total	16	5	6	24
7.	ECA-IV	-		-	-	-	0
8.	AC	-		-	-	-	0

9.	DM	-	Departmental Minor 1/2	3	1/0	0/2	4
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Third Year, Semester V

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	BHM-302	Industrial Management	2	0	0	2
2.	PC	BEC-301	Digital communication	3	1	2	5
3.	PC	BEC-302	Control Systems	3	1	0	4
4.	PC	BEC-303	Digital Signal Processing	3	1	0	4
5.	PE1	-	Program Elective-1	3	1	0	4
6.	PLBSE	BEC-304	Internet of Things	2	0	2	3
			Total	16	4	4	22
7.	ECA-V	-		-	-	-	0
8.	DM	-	Departmental Minor 1/2	3	1/0	0/2	4

Third Year, Semester VI

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	BHM-354	Business Management	2	0	0	2
2.	PC	BEC-351	Microcontroller and Embedded Systems	3	1	0	4
3.	PC	BEC-352	Optical Communication	3	1	2	5
4.	PC	BEC-353	Microwave Engineering	3	1	2	5
5.	PE2	-	Program Elective-2	3	1	0	4
6.	P	BEC-370	Project Part-I	0	0	4	2
7.	S	BEC-380	Seminar	0	0	4	2
			Total	14	4	12	24
8.	ECA-VI	-		-	-	-	0
9.	DM	-	Departmental Minor 1/2	3	1/0	0/2	4

Final Year, Semester VII

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	PC	BEC-401	VLSI Design	3	1	2	5
2.	PC	BEC-402	Introduction to Wireless and Cellular Communication	3	1	0	4
3.	PE3	-	Program Elective-3	3	1	0	4
4.	OE	-	-	2	1	0	3
5.	P	BEC-440	Project Part-II	0	0	6	3
			Total	11	4	8	19

6.	ECA-VII	-		-	-	-	0
7.	DM	-	Departmental Minor 1/2	3	1/0	0/2	4

Final Year, Semester VIII

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	IP	IEC400	Industrial Practices	0	0	24	12
	Without Industrial Practices (IP)						
2.	MP	BEC-410	Minor project	0	0	8	4
3.	IE [#]	IEC-401-404	Industrial Elective-1	3	1	0	4
4.	IE [#]	IEC-405-409	Industrial Elective-2	3	1	0	4
			Total	6	2	8	12
5.	DM	SEC-410/ 420	Research Project*	0	0	4	2

University level Theory based courses run by the department

*For Theory based Department Minor only

Note: Department may consider PE1, PE2, PE3 to be taught through MOOCs. The MOOC courses may replace any Program Core (PC) subject if the course content of MOOCs courses matches more than 75% with the course content of PC subject.

Program Elective

S.N.	Paper Code	Subject	Prerequisite Subject	L	T	P	Credits
PE1							
01.	BEC-326	Optoelectronics		3	1	0	4
02.	BEC-327	Information Theory & Coding		3	1	0	4
03.	BEC-328	Digital System Design		3	1	0	4
04.	BEC-329	Data Communication Network		3	1	0	4
PE2							
01.	BEC-376	VLSI Technology		3	1	0	4
02.	BEC-377	DSP Architecture and Applications		3	1	0	4
03.	BEC-378	Antenna Design		3	1	0	4
04.	BEC-379	Radar Technology		3	1	0	4
PE3							
01.	BEC-426	Digital Image Processing		3	1	0	4
02.	BEC-427	RFIC		3	1	0	4